TSEPQ-A

TESTER, BIT ERROR

1. GENERAL. This procurement requires a combination hand-held bit error rate tester and breakout box for EIA RS-232-C/CCITT V.24 interfaces.

2. CLASSIFICATION. Type II, Class 5, Style E, and Color R in accordance with MIL-T-28800.

3. OPERATIONAL REQUIREMENTS. The equipment shall perform synchronous and asynchronous bit error rate tests and perform as a breakout box. The equipment shall meet the following specifications.

3.1 Bit error rate testing.

3.1.1 Synchronous rates.

    a. With internal clock: 1.2 to 64 kbps.

    b. With external clock: 1.2 to 72 kbps.

3.1.2 Asynchronous rates. 0.05 to 19.2 kbps.

3.1.2.1 Parity. Selectable odd, even or none.

3.1.2.2 Stop bits. Selectable 1, 1.5, or 2.

3.1.2.3 Codes. BAUDOT and selectable 7 or 8 bit ASCII.

3.1.3 Display and indicators. 3 digits minimum for displaying error count, error-free seconds, and number of bits transmitted and received. Sync and sync loss indicators shall also be provided.

3.1.4 Patterns. 63, 511, and 2047 psuedorandom; Fox; and Alternate.

3.1.5 Error insertion. The equipment shall allow the operator to insert errors into all transmitted patterns.

3.2 Breakout box. The equipment shall function as a breakout box to provide access to and indicate signal activity on each line of the interface between data terminal equipment (DTE) and data circuit-terminating equipment (DCE). Indicators shall be powered by the signal being monitored.

3.2.1 Polarity indicators. Positive and negative signal indicators shall be provided for each active pin of the interface. A spare indicator shall be provided for monitoring any other pin.

3.2.2 DIP switches. Individual DIP switches shall be provided to allow each line to be opened or closed.

3.2.3 Test points. Test points shall be provided for accessing each line and for jumpering any line to any other line. Positive and negative voltage test points and a ground test point shall be available for injecting into signal lines.

3.3 Interface. EIA RS-232-C/CCITT V.24

4. GENERAL REQUIREMENTS.

4.1 Power source. MIL-T-28800 nominal and dc internal power source requirements are invoked as

detailed below.

4.1.1 Nominal power source. Maximum power consumption: 10W.

4.1.2   DC internal power source. Internal batteries and charger are required. Minimum operating time shall be 2 hours following a maximum recharge time of 16 hours.

4.2 Weight. 2.2 kg (5 lb) maximum.

4.3 Dimensions. 152 mm (6 in) high, 203 mm (8 in) wide, and 152 mm (6 in) deep, maximum.

4.4 Lithium batteries. Per MIL-T-28800, lithium batteries are prohibited without prior authorization. A request for approval for the use of lithium batteries, including those encapsulated in integrated circuits, shall be submitted to the procuring activity at the time of submission of proposals. Approval shall apply only to the specific model proposed.